



ProFoldin

10 Technology Drive, Suite 40, Number 188

Hudson, MA 01749-2791 USA

Phone: (508) 735-2539

FAX: (508) 845-9258

www.profoldin.com

info@profoldin.com

INSTRUCTIONS

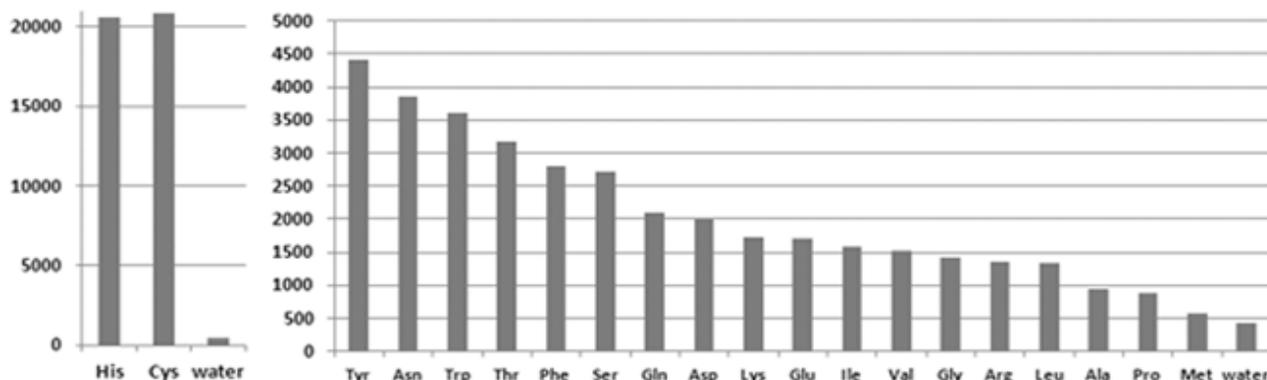
ProFoldin Amino Acid Assay Kit

CATALOG NUMBER **AAK1000**

INTRODUCTION

The Amino Acid Assay Kit is for measurement of micromolar to millimolar concentrations of amino acids. The assay sensitivity is 0.01 mM for His and Cys and less than 0.5 mM for most amino acids. The assay is based on the principle that amino acids interact with dye C53 and enhance the fluorescence intensity at 535 nm (excitation at 485 nm).

The assay is compatible with HEPES buffer, low concentrations of non-ionic detergent (<0.01%), MgCl₂ (<5 mM), CaCl₂ (<5 mM) and phosphate (<1 mM). The assay is not compatible with Tris buffer or other primary amine buffers. It is not compatible with DTT or EDTA.



The assay kit (catalog number AAK1000) includes 1 ml of 10 x dye C53. It is for 1000 assays using 384-well plates or 250 assays using 96-well plates. Cuvettes may also be used for the assays.

MEASUREMENT OF AMINO ACIDS USING 96-WELL PLATES

Amino Acid Standard Curve

1. Prepare standard amino acid solutions with a series of concentrations from 0.01 to 10 mM in 10 mM HEPES, pH7.5.
 2. Prepare 1 x dye C53 dye by dilution of the 10 x dye C53 with water (10-fold dilution).
 3. Mix 160 μ l of the amino acid solution with 40 μ l of 1 x dye C53 in the wells of a 96-well plate for 5 min and read the fluorescence at 535 nm (excitation at 485 nm).
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Data Analysis

Plot the fluorescence intensity **Fc** and the amino acid concentration [**Amino acid**] to generate the linear standard curve.

$$\mathbf{Fc} = \mathbf{a} [\mathbf{Amino\ acid}] + \mathbf{b}$$

Where the **Fc** values are from experimental data, the **a** and **b** values are from the linear fitting between the **Fc** values and the amino acid concentrations.

UNKNOWN SAMPLES

Follow the same procedure to measure the fluorescence intensity **Fc** values from the unknown samples. Calculate the acid concentrations in the unknown samples using the **Fc** values from the unknown samples and the **a** and **b** values from the standard curve.

$$[\mathbf{Amino\ acid}] = (\mathbf{Fc} - \mathbf{b}) / \mathbf{a}$$

RELATED PRODUCTS

HIS200	MicroMolar Histidine Assay Kit
CYS200	MicroMolar Cysteine Assay Kit
PEP200	MicroMolar Peptide Assay Kit
CAK1000	Coenzyme A Assay Kit
EDTA200	MicroMolar EDTA Assay Kit
DTT200	MicroMolar DTT Assay Kit
DAK1000	Detergent Assay Kit
SDS200	NanoGram SDS Ass Kit
CMC1000	Detergent Critical Micelle Concentration (CMC) Assay Kit
LIP1000	MicroGram Lipid Assay Kit
MAD100K	MicroMolar ADP Assay Kit
MUD100K	MicroMolar UDP Assay Kit
MGD100K	MicroMolar GDP Assay Kit
MCA1000	MicroMolar Copper Assay Kit
NZA1000	NanoMolar Zinc Assay Kit
MSA200	MicroMolar Sulfate Assay Kit
NPA1000	NanoMolar Phosphate Assay Kit
PMX200	MicroGram Polymyxin Assay Kit
CPT200	MicroMolar Cisplatin Assay Kit

For more concentration assays, please visit our website at www.profoldin.com.